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Title: UC/LANL Postdoc Entrepreneurs 2021

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UC/LANL Postdoc Entrepreneurs 2021

A 6-month fellowship program, a joint initiative of the University of California and Los Alamos, supports early career scientists as they explore applications and evaluate market opportunities for their technologies.

Eric Davis

SoniView

Applying NON-INVASIVE ACOUSTIC MULTIPHASE FLOW SENSORS to improve beer production

Fermentation & spent yeast removal are processes that rely on a brewer being at the right place at the right time to avoid wasting beer, resources, and time. Eric Davis and his team have developed SoniView, a suite of noninvasive process sensors for tanks that provide precision fermentation monitoring, and automate yeast slurry dumping. Automating these processes could increase brewers' batch turnaround time up to 25% and significantly reduce costs associated with dumping slurry waste. Craft brewers are eager for these processes to be automated.

Technology Roadmap: BENCH PROTOTYPE (August 2021) | FIELD TRIALS (Spring 2022)

EnPeel

Using NANOCAGED ENZYMES to peel apart multi-layered plastics resulting in clean, single-stream plastic

Tanya Elkin

Recent regulatory drivers require beverage containers to use a set amount of recycled plastic, starting with 15% recycled content in 2022 and 50% by 2030. The challenge now is to find suppliers that 1 Recycle more than polyethylene terephthalate (PET); 2 Produce virgin-quality resins; and, 3 Compete economically within the existing resin market. EnPeel is developing an enzymatic process that can break down the most challenging types of plastics, such as polypropylene. The goal of this technology is to reach purity levels that recycled plastics today don't readily achieve, and to become the engine of facilities across the country that process bulk plastic waste and formulate virgin monomers.

Technology Roadmap: DEVELOPMENT (2021) | DEMONSTRATIONS (2023) | PROTOTYPE (2024)

Tony Shin

ADAPTAMIZE

Software solutions for UAV/UGV RADIATION MONITORING and MAPPING

Detailed, actionable information is essential to meet regulatory requirements accounting for, maintaining or cleaning up radioactive materials. UAVs/drones offer enhanced methods of collecting and delivering optimized information. ADAPTAMIZE has developed a novel method for combining predictive radiation mapping with optimized motion trajectory that delivers a user-friendly interface of UAV/drone diagnostics and data analysis tools. Its advantages include: 1 Multiple UAV/drone controls operated by a single operator; 2 Real-time data fusion; and, 3 An agnostic software platform. Emerging applications are being recognized, including the decontamination & decommissioning of 20 US nuclear plants. Automated surveillance & monitoring methods reduce dependencies on highly trained labor & time.

Technology Roadmap: CONTROLS SOFTWARE (2021) | DEMONSTRATION (2022)

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